

# A NEW SPECIES OF *PORCELLIO* LATREILLE, 1804 (CRUSTACEA: ISOPODA: ONISCIDEA) FROM SPAIN AND THE FIRST REPORT OF WOODLICE FROM THE EXTREMADURA REGION

Lluc Garcia<sup>1</sup>, Daniel Parejo-Pulido<sup>2</sup> & Emmanuel Séchet<sup>3</sup>

<sup>1</sup> Corresponding author. Balearic Museum of Natural Sciences, P.O. box 55. Sóller (Majorca) 07100 Balearic Islands. Interdisciplinary Ecology Group. University of the Balearic Islands (UIB), Spain.

Email: [llucgarcia@telefonica.net](mailto:llucgarcia@telefonica.net) – ORCID iD: <https://orcid.org/0000-0002-6043-288X>

<sup>2</sup> Instituto de Investigación en Recursos Cinegéticos, IREC (CSIC, UCLM, JCCM), Ronda de Toledo, s/n 13005, Ciudad Real, Spain.

Email: [dapapu96@gmail.com](mailto:dapapu96@gmail.com) – ORCID iD: <https://orcid.org/0000-0002-7392-2423>

<sup>3</sup> Correspondant du Muséum National d'Histoire Naturelle (MNHN, Paris, France), Département Milieux et Peuplements Aquatiques, 27 Le Journal, 49125 Cheffes, France. Email: [sechet.e@free.fr](mailto:sechet.e@free.fr) – ORCID iD: <https://orcid.org/0000-0003-2784-1101>

## ABSTRACT

*Porcellio wadianae* sp. nov. (Crustacea: Oniscidea: Porcellionidae) is described from the Extremadura region, Spain, Iberian Peninsula. The new species can be classified within the so-called “*Porcellio* Atlantic group”, defined by Vandel. It is characterized by having an integumentary glandular system uncommon within this genus and by other characteristics that differentiate it from the other species of the same group present in the Ibero-Macaronesian and Northern African region. In addition, we report additional observations on woodlice species collected in Extremadura, one of Spain's most poorly known regions concerning terrestrial Isopod fauna.

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**Keywords:** Oniscidea, *Porcellio*, new species, new records, Extremadura, Iberian Peninsula.

## RESUMEN

**Una nueva especie de *Porcellio* Latreille, 1804 (Crustacea: Isopoda: Oniscidea) de España y primeros datos sobre los isópodos terrestres de Extremadura**

Se describe *Porcellio wadianae* sp. nov. (Crustacea: Oniscidea: Porcellionidae) de la región de Extremadura, España, Península Ibérica. La nueva especie puede clasificarse dentro del llamado “grupo Atlántico” del género *Porcellio*, definido por Vandel. Se caracteriza por tener un sistema glandular tegumentario poco común en este género y por otras características que lo diferencian del resto de especies del mismo grupo presentes en la región ibero-macaronésica y norteafricana. Además, presentamos observaciones adicionales sobre otras especies recolectadas en Extremadura, una de las regiones menos conocidas de España en lo que se refiere a su fauna de isópodos terrestres.

**Palabras clave:** Oniscidea, *Porcellio*, nueva especie, nuevos registros, Extremadura, Península Ibérica.

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## Introduction

The genus *Porcellio* Latreille, 1804 is one of the most diverse within the Oniscidea across the Iberian Peninsula, the Macaronesian region and the North of Africa. In the Iberian Peninsula, about 45 species of this genus have been recorded, although some of them must be reviewed, since they cannot be identified from the original descriptions (see Schmalfuss, 2003). In this article we describe *Porcellio wadianae* sp. nov., a well characterized species belonging to the “*Porcellio* Atlantic group” (Vandel, 1946, 1951, 1956). This new species shows some morphological characteristics that allows to be distinguish it from all the other species of this group recorded from the Ibero-Macaronesian and Maghrebian regions.

Additionally, some other Oniscidea collected in Extremadura are listed. Among them, there are very common and widely distributed species but also poorly known species, such as *Porcellionides elegans* (Pollo Zorita, 1982), which we illustrate to facilitate future identifications.

## Material and methods

The material has been preserved in 75% ethanol. A Nexius-Z stereo microscope (Euromex) was used for the dissection of the appendages. The sexual appendages, pereopods, pleopods and antennae, have been temporarily mounted in glycerine for microscopic study and, later, preserved in microvials with ethanol. The mouthparts and tergites have been treated with Amman's lactophenol and mounted using Faure's liquor. The drawings were made using a camera lucida attached on an Olympus CH30 biological microscope. Photographs of the complete animals were taken using a digital microscope (Dino-Lite) and the main measurements have been taken with the associated software (Dino-capture 2.0). Some of the photographs have been stacked using the free software Combine ZP. The final drawings were also prepared using the GIMP2 software (Montesanto, 2015) and the additional use of an Intuos drawing tablet (Wacom). The relative position of the noduli laterales was fixed using the Vandel's method (Vandel, 1960a). The type material has been deposited in the collection of the National Museum of Natural Sciences of Madrid (MNCN). A dissected specimen of the new species, and the specimens of the other species that have been collected, has been preserved in the first author's personal collection (CLLG). The study area includes various localities in the provinces of Badajoz and Cáceres (Fig. 1) that are listed in the section dedicated to each species.

## ACRONYMS

CLLG Lluç Garcia personal collection, Mallorca, Spain.  
MNCN National Museum of Natural Sciences - Museo Nacional de Ciencias Naturales, Madrid, Spain.



Fig. 1.— Geographic location of Extremadura in the Iberian Peninsula. The stars indicate the localities of *Porcellio wadianae* sp. nov.

Fig. 1.— Situación geográfica de Extremadura en la Península Ibérica. Las estrellas indican las localidades de *Porcellio wadianae* sp. nov.

## Results

### TAXONOMY

Order Isopoda Latreille, 1817  
Suborder Oniscidea Latreille, 1802  
Family Porcellionidae Verhoeff, 1918  
Genus *Porcellio* Latreille, 1804

### *Porcellio wadianae* Garcia & Parejo-Pulido sp. nov.

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Figs. 2–5

### MATERIAL EXAMINED

**Holotype.** ♂, Trujillo, Cáceres, Extremadura, Spain, 30-IV-2004, Matthieu Vaslin leg., ex coll. Emmanuel Séchet (MNCN 20.04/12084)

**Paratypes.** Cáceres: 1 ♀, same collection data as for holotype (MNCN 20.04/12085). – 1 ♂, same collection data as for holotype (CLLG, dissected specimen partly mounted on microscope slides and partly stored in microtubes). – Badajoz: 1 ♀, Doña Blanca, Don Benito, Extremadura, Spain, 8-XII-2018, D. Parejo-Pulido leg. (MNCN 20.04/12086). – 1 ♀, same collection data as for preceding (MNCN 20.04/12087). – 1 ♀, same collection data as for preceding, 24-III-2019 (MNCN 20.04/12088). – 1 ♀, same collection data as for preceding, 24-III-2019 (MNCN 20.04/12089). – 1 ♂, Doña Blanca, Don Benito, Extremadura, Spain, 25-I-2020, D. Parejo-Pulido leg. (MNCN 20.04/12090). – 1 ♀, same collection data as for preceding (MNCN 20.04/12091). – 1 ♀, same collection data as for preceding (CLLG).

**DIAGNOSIS.** A medium-sized *Porcellio* species (8–12 mm), characterized by: distinct coloration; body granulated; multiple, separated, glandular fields near to the pereon and pleon epimera outer margins; noduli laterales of the fourth pereon tergite non excentric; male pleopod 1 exopod with round-

ed posterior lobe and endopod with the tip bend outwards; respiratory fields of male pleopods 1-2 not indented. Telson with a short base and a long, triangular, tip.

**DESCRIPTION.** Maximum length observed: male 12 mm; female 11 mm. Habitus and general body form, as in Figs. 2A–B. Colour variable. Two types of body colouration was observed. Type 1 (Fig. 2A): antennae grey; cephalon, grey with yellow spots, lobes dark grey; anterior pereon tergites (1-4) yellowish with grey stripes and a middle stripe of the same color, posteriors (5-7) darker; pleonites and pleotelson grey; pereon and pleon epimera of light color with grey spots. Type 2 (Fig. 2B): same colour pattern, but with all the grey areas darker and pereon and pleon epimera dark grey, with light edges as in Type 1. In both types, a longitudinal white central line runs across the whole body, except the cephalon and the pleotelson.

Cephalothorax, pleon and pleotelson dorsally granulated; pereon-tergites hind margin showing a clear line of granulations; pleonites with a transversal line of granulations in the middle part and posterior edge; basal part of pleotelson with granulations, some of them spinescent; some specimens also have thorny granulations on the frontal face of the uropod-symphodites. Integument covered with semi-ovoid cuticular scales and tricorn type scale setae; multiple, separate, glandular fields, near the epimera lateral margins (Figs. 2C, 3B–C); number of glandular fields variable: a maximum of seven elongated, semiovoid, fields per side have been observed in the first pereonite, each with a number of pores also variable, between 10 and 2; in some specimens, one or more glandular fields are also seen on the lateral border of the pleonites. Noduli laterales small, almost equidistant from the lateral margin in pereonites 1-7, not far from the edge, located on an unpigmented area (Fig. 4F).

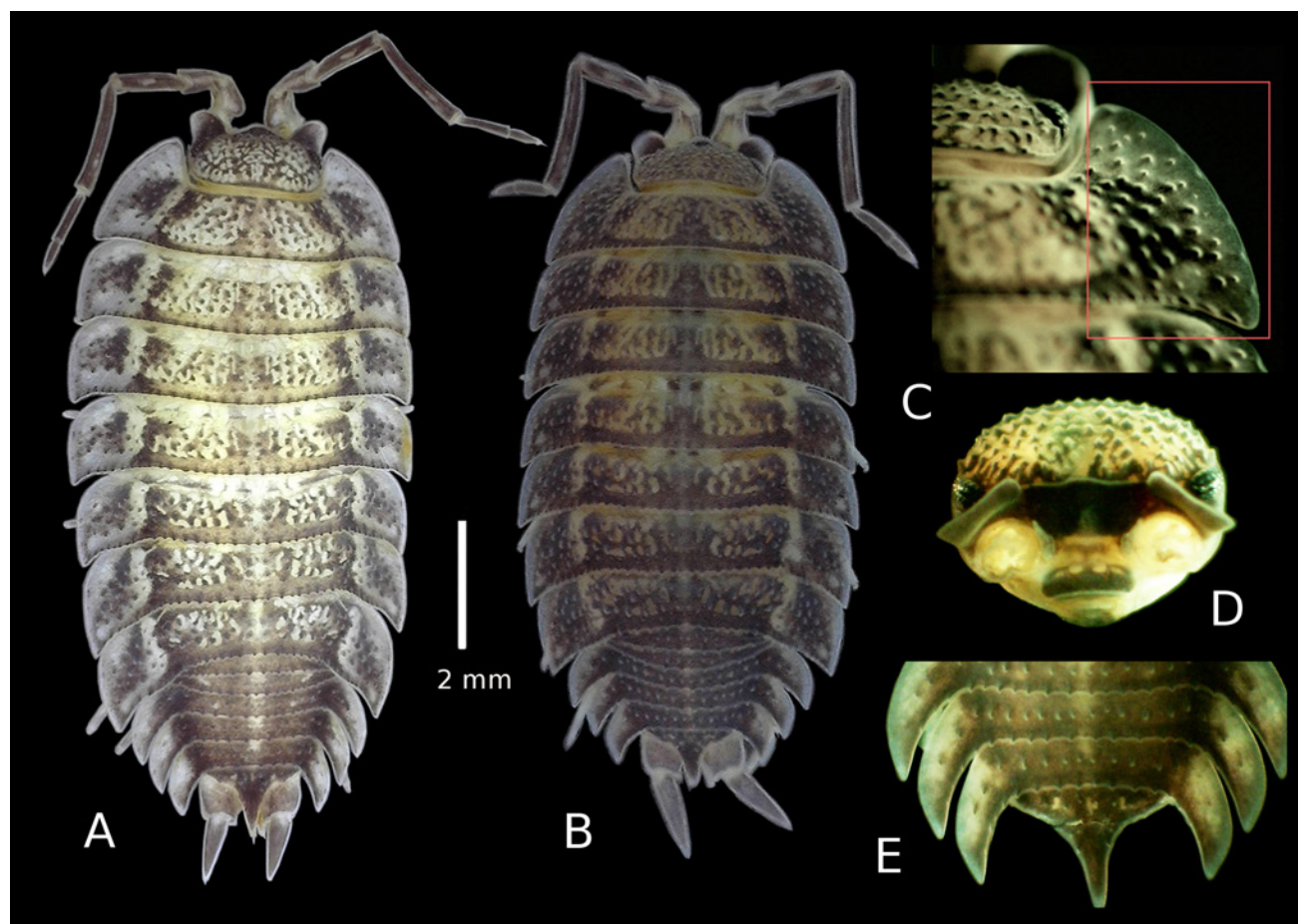


Fig. 2.— *Porcellio wadianae* sp. nov. A. Paratype ♀ from Don Benito (Badajoz, Extremadura), 12 mm total length, habitus. B. Holotype ♂ from Trujillo (Cáceres, Extremadura), 11 mm total length, habitus. C. Paratype ♂ from Trujillo, detail of cephalon and first pereonite; D. Same specimen, (B) cephalon, frontal view. E. Same specimen (B), pleonites 3-5 and pleotelson, dorsal view (uropods removed).

Fig. 2.— *Porcellio wadianae* sp. nov. A. Paratipo ♀ de Don Benito (Badajoz, Extremadura), 12 mm de longitud total, habitus. B. Holotipo ♂ de Trujillo (Cáceres, Extremadura), 11 mm de longitud total, habitus. C. Paratipo ♂ de Trujillo, detalle de cefalón y primer pereonito. D. Cefalón del mismo espécimen, vista frontal. E. Mismo espécimen, pleonitos 3-5 y pleotelson, vista dorsal (sin los urópodos).



Cephalon (Fig. 2D) without supra-antennal line; frontal lobe triangular, with rounded tip, approximately twice as wide as long; lateral lobes large, variable in shape, with a rounded upper margin, a straight or slightly concave outer edge and a concave dorsal surface; front with a tubercle; eyes with about 20-24 ommatidia.

Pereonite 1 hind margin, slightly sinuated (Fig. 3B); 2-6 straight, concave at sides; 7, regularly concave; posterior corners of epimera bending backwards; pleonites 3-5 with the posterior corners directed backwards (Fig. 2A-B). Pleotelson (Fig. 2E) with a short basal part and a narrow, distinct, triangular tip, far exceeding the posterior line of fifth pleon epimera. Pos-

terior margin of the uropodal sympodites oblique and concave (Fig. 2A-B).

Uropodal exopods short, triangular; endopods not surpassing the posterior end of pleotelson (Fig. 2A-B).

First antennae (*antennulae*) (Fig. 3D) with the basal article slightly shorter than the sum of the second and third; distal article with 15-18 aesthetascs and a rounded lobe.

Second antennae (Fig. 3A) not exceeding the posterior margin of pereonite 3; fifth article of the peduncle 1.3 times longer than the flagellum; first flagellar article about 1.7 times longer than the second; ridges and teeth of peduncular articles 2-3 well developed.

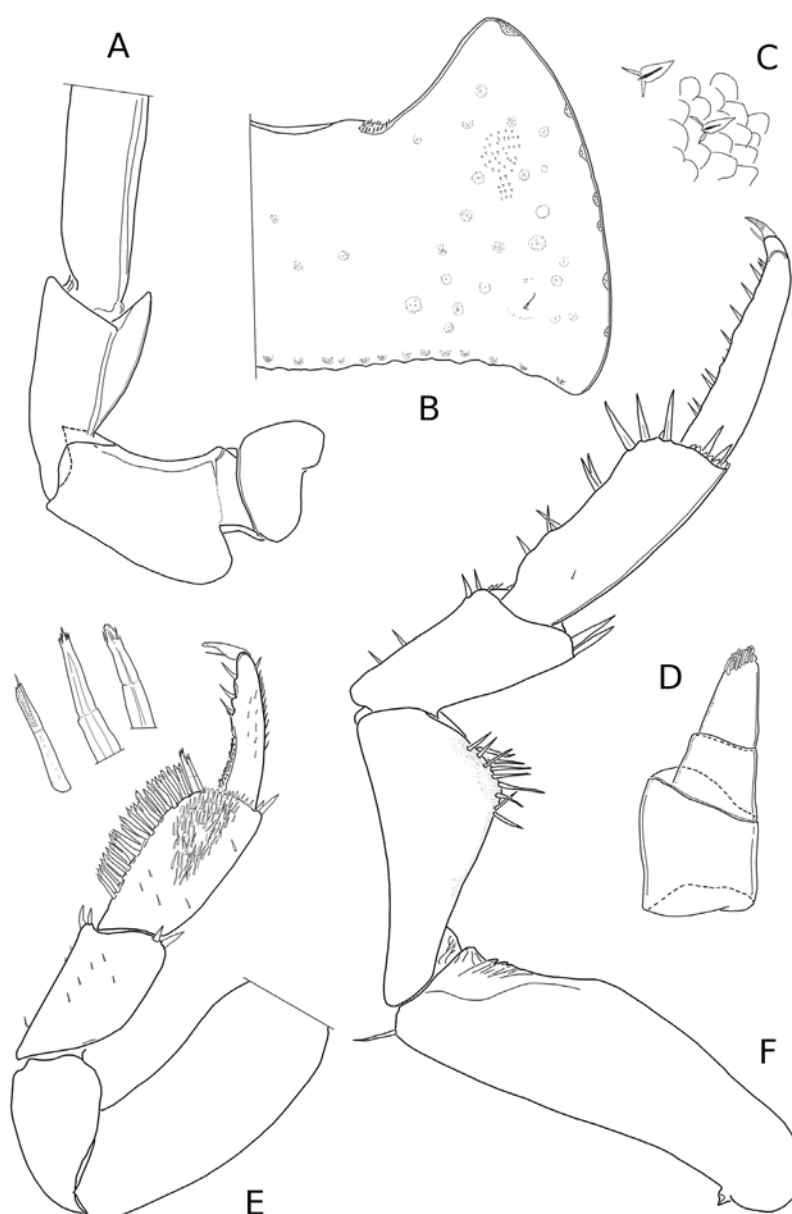


Fig. 3.— *Porcellio wadianae* sp. nov., ♂. A. Second antenna peduncular articles. B. Right epimeron of the first pereonite. C. Detail of cuticular scales and scale-setae. D. First antenna. E. First pereopod (frontal) and setae types of the carpopodite. F. Seventh pereopod (frontal).

Fig. 3.— *Porcellio wadianae* sp. nov., ♂. A. Artículos pedunculares de la segunda antena. B. Epimerón derecho del primer pereonito. C. Detalle de las escamas cuticulares y seda-escamas. D. Primera antena. E. Primer pereópodo (frontal) y diferentes tipos de sedas del carpopodito. F. Séptimo pereópodo (frontal).

Right mandible (Fig. 4D) with dichotomized molar penicil and 7-8 penicils in the middle part; left mandible (Fig. 4E) with dichotomized molar penicil and 8-9 penicils near the hairy lobe.

Maxillule (Fig. 4B) with 4 + 6 teeth and a supplementary seta on the external branch; internal branch with two thick penicils and a sharp and long posterior corner.

Maxilla (Fig. 4C) with three thick setae between the lobes; outer lobe a little more than twice as wide as the inner one.

Maxilliped (Fig. 4A) with two setae in the first article of the palp and three groups in the second; endite with three triangular teeth on the anterior edge and a pointed seta on the caudal face, without penicil; caudal face of basis covered with setae.

Male: Pereopod 1 (Fig. 3E) carpus with a dense ventral brush of setae and antennal brush; propodus with concave spinose area in the proximal half of the ventral margin. Pereopods 2-6 without modifications. Pereopod 7 (Fig. 3F) ischium with concave ventral margin and an excavated setose area in the frontal face. Pleopod 1 (Fig. 5A-B) exopod with rounded medial lobe, respiratory field not indented; endopod twice longer than exopod, with distal part reflexed outwards, apex with tiny spinulation. Pleopod 2 (Fig. 5C-D) exopod triangular, with straight inner margin, apex bilobed; distal part of outer margin with 5-6 strong setae; respiratory field not indented; endopod 1,6 times longer than exopod. Genital papilla with ventral shield and ovoid distal part (Fig. 5E).

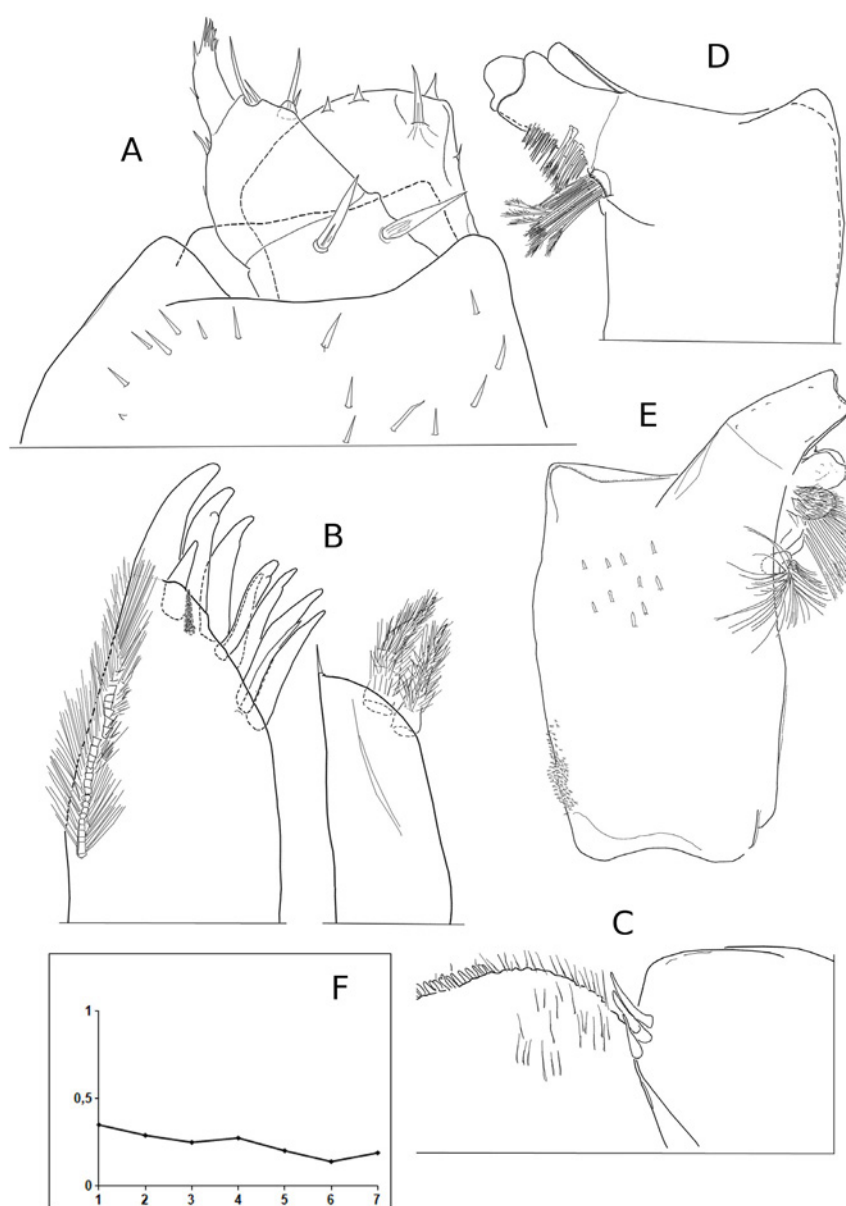


Fig. 4.— *Porcellio wadianae* sp. nov., ♂. A. Maxilliped distal part (frontal). B. Second maxilla distal parts (frontal). C. First maxilla, detail of distal lobes. D. Right mandible. E. Left mandible. F. Noduli laterales.

Fig. 4.— *Porcellio wadianae* sp. nov., ♂. A. Parte distal del maxilípido (frontal). B. Partes distales de la maxílula (frontal). C. Maxila, detalle de los lóbulos distales. D. Mandíbula derecha. E. Mandíbula izquierda. F. Noduli laterales.

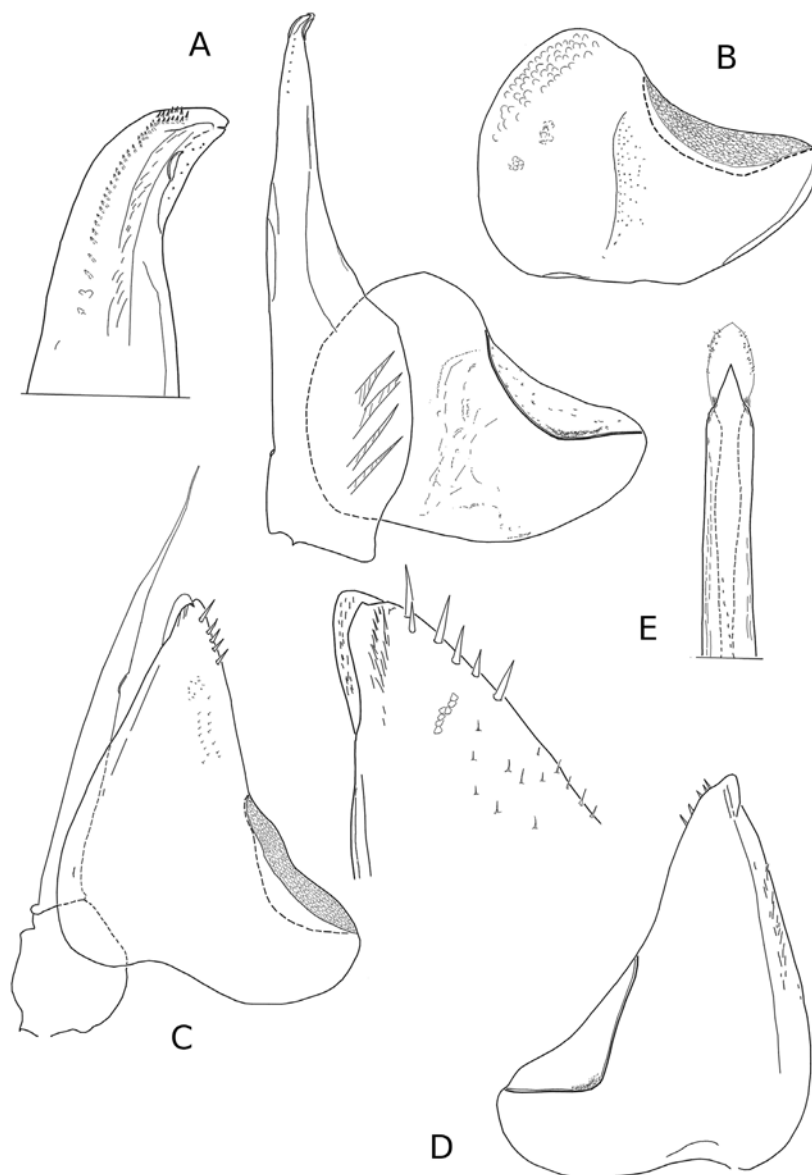


Fig. 5.— *Porcellio wadianae* sp. nov., ♂. A. First pleopod; detail of endopod distal part (ventral). B. Pleopod 1 exopod (frontal). C. Second pleopod and detail of the distal part of exopod (frontal). D. Pleopod 2 exopod (ventral). E. Genital papilla.

Fig. 5.— *Porcellio wadianae* sp. nov., ♂. A. Primer pleópodo; detalle de la parte distal del endopodito (ventral). B. Exopodito del pleópodo 1 (frontal). C. Segundo pleópodo y detalle de la parte distal del exopodito (frontal). D. Exopodito del pleópodo 2 (ventral). E. Apófisis genital.

**ETYMOLOGY.** From Wadi-Ana, the Arabic name for the Guadiana river, which crosses the region where this species has been collected.

**REMARKS.** *Porcellio wadianae* sp. nov. must be classified within the ‘*Porcellio* Atlantic group’ defined by Vandel (1946, 1951, 1956). It shares characteristics with some of the species included in the so-called ‘Madeiran subgroup’ (Vandel, 1960b) such as a glandular system characterized by the multiplicity of pore fields arranged along the lateral edge of each pereon tergite, but separated from each other. This characteristic is only previously known in *P. scitus* Budde-Lund, 1885, *P. atlantidium* Paulian de Félice, 1939, *P. cataractae* Vandel, 1960 and *P. ma-*

*culipes* Budde-Lund, 1885, all endemic to the island of Madeira. In addition to this characteristic glandular arrangement, *Porcellio wadianae* sp. nov. shows other characteristics attributed by Vandel (1960b) to the ‘Madeiran subgroup’, i.e: integument covered with granulations and moderate sexual dimorphism of the seventh pereopod; but it differs from them by the shape of the male pleopod 1 exopod, lacks of antennal sexual dimorphism and shape of the telson, among other morphological features. In the Iberian Peninsula, about 15 species belonging to the “*Porcellio* Atlantic group” have been cited (see Cifuentes, 2018, 2019; Cifuentes & Barranco, 2020). *Porcellio wadianae* sp. nov. differs from all of them through its combination of morphological characteristics, but

especially by the arrangement of the glandular fields. In the Iberian and Macaronesian species of the Atlantic group, there is a single glandular field on each tergite, generally semi-ovoid and proximal to the lateral margin, or extending along the entire edge. In some species (such as *Porcellio xavieri* Arcangeli, 1958 or *Porcellio incanus* Budde-Lund, 1885) the glandular field may be totally absent or very small (Vandel, 1951, 1960b, 1962; Schmölzer, 1965).

**ECOLOGY.** The Trujillo habitats are mainly consisted of farmland and artificial meadows, grasslands, ‘dehesa’ (pastures) and oak woodlands (*Quercus ilex* L. and *Quercus suber* L.), at an approximate height of 500 meters above sea level. The specimens of Don Benito were collected under stones in an area dominated by grasslands and degraded remains of native oak woodlands (*Quercus ilex*), surrounded by rain fed crops and holm oak groves, at an approximate height of about 287 meters above sea level. Holm oak (*Quercus ilex*) woodland would be the potential vegetation in both areas. Climate of both localities is typically mediterranean, characterized by temperate and rainy winters and dry, hot summers (Trujillo average annual temperature and rainfall: 15.2°C, 501 mm; Don Benito average annual temperature and rainfall: 16.6°C, 483 mm).

#### NEW RECORDS IN EXTREMADURA

To the best of our knowledge and the reviewed literature, there are no previous records of terrestrial isopods in Extremadura. In the framework of the current faunistic study, we list additional species collected by us in the region. Some collected species are widely distributed, while others are poorly known (e.g. *Porcellionides elegans*) and have been illustrated again to facilitate future identification. All these specimens have been preserved in the first author’s personal collection (CLLG).

#### Family Porcellionidae

##### *Lucasius pallidus* (Budde-Lund, 1885)

**EXAMINED MATERIAL:** **Badajoz:** 1 ♀, Don Benito, 14-IV-2019, D. Parejo-Pulido leg.

A common species in the southern Iberian Peninsula. Occasionally myrmecophilous. For diagnostic characters, see Vandel (1962). Distribution, see Schmalfuss (2003).

##### *Porcellionides pruinosus* (Brandt, 1833)

**EXAMINED MATERIAL:** **Badajoz:** 1 ♂, Don Benito, 23-VII-2018. – 1 ♂, same collection data as for preceding, 13-IV-2019. – 1 ♀, same collection data as for preceding; 20-IV-2019, D. Parejo-Pulido leg. – 2 ♂♂, 1 ♀, Quintana de la Serena, 16-II-2020, J. Cendrero leg.

A cosmopolitan species, common in human environments. For diagnostic characters see Vandel (1962). Distribution, see Schmalfuss (2003).

##### *Porcellionides sexfasciatus* (Budde-Lund, 1885)

**EXAMINED MATERIAL:** **Cáceres:** 3 specimens, Sierra Brava reservoir, Zorita, 17-II-2019, D. Parejo-Pulido leg. – 4 ♂♂, 7 ♀♀, Trujillo, 4-I-2020, D. Parejo-Pulido leg. – **Badajoz:** 2 ♀♀, San Jorge de Alor, 17-XI-2018, D. Parejo-Pulido leg. – 1 specimen, Badajoz, 12-I-2019, D. Parejo-Pulido leg. – 1 ♂; Don Benito, 23-IX-2018. – 2 specimens; same collection data as for preceding, 4-XI-2018. – 1 ♂, same collection data as for preceding. – 2 specimens, same collection data as for preceding, 17-XI-2018, 25-XI-2018. – 5 specimens, same collection data as for preceding, 8-XII-2018. – 3 specimens, same collection data as for preceding, 30-XII-2018. – 4 specimens; same collection data as for preceding, 8-III-2019. – 2 specimens, same collection data as for preceding, 14-IV-2019. – 6 ♂♂, 11 ♀♀, same collection data as for preceding, 25-I-2020. – 5 specimens, same collection data as for preceding, 26-I-2020, D. Parejo-Pulido leg. – 45 specimens, Garbayuela, 9-II-2020, J. Cendrero leg. – 4 ♂♂, 8 ♀♀, Quintana de la Serena, 16-II-2020, J. Cendrero leg.

The extreme variability of *Porcellionides sexfasciatus* has given rise to the definition of many subspecies, especially in the Iberian Peninsula and Northern Africa, but there is considerable overlap in many characteristics. Many of the Extremadura specimens studied can be classified within the subspecies *P. sexfasciatus lusitanus*, defined by Vandel (1946). However, only by the characteristic of the exopod of the male first pleopod, which is also variable within this subspecies (Vandel, 1946). Other morphological characteristics, such as the length of the antennae or the arrangement of the granulations, do not coincide with those described. This subspecies is known from Portugal, North Africa and Southern Spain (Vandel, 1946; García, 2019). However, specimens with the exopod of the male first pleopod according to *Porcellionides sexfasciatus lucasioides* (Vandel, 1953) have also been examined. At the moment we prefer not to assign these specimens from Extremadura to any of the subspecies previously described until we can carry out a more in-depth study.

##### *Porcellionides elegans* (Pollo Zorita, 1982)

Figs. 6-7

**EXAMINED MATERIAL:** **Cáceres:** 1 ♂, Trujillo, 30-IV-2004, Matthieu Vaslin leg. (ex coll. E. Séchet). – 1 ♀, Zorita, Sierra Brava reservoir, 17-II-2019, D. Parejo-Pulido leg. – **Badajoz:** 1 ♂, Don Benito, 30-XII-2018, D. Parejo-Pulido leg.

A species previously recorded in Portugal and in Castilla-La Mancha (Spain) (Pollo Zorita, 1982, 1986). We consider it interesting to illustrate again its main diagnostic characteristics since they were not sufficiently figured.

This species has some very well defined morphological features, i.e.: the shape of the male ple-



opod 1 exopod, with a posterior lobe deeply divided (Fig. 7C); a long and slender second antennae (Fig. 6D) and cephalon without supra-antennal line (Fig. 6B). The glandular system and integumentary appearance (Fig. 6F) is of the same type to that of other species of the genus *Porcellionides* Miers, 1877, such as *Porcellionides sexfasciatus*, but the glandular fields are limited to the central part of the epimera, with the exception of those of the first pereon tergite, that occupies an anterior position (Fig. 6E). Pollo Zorita (1982) assures that there is no secondary sexual dimorphism but in the examined male specimens the seventh pereopod shows a marked concavity in the frontal face of the ischio-

podite (Fig. 7B) and the exopodites of the uropods are distinctly longer in the male than in the female specimens (Fig. 6A).

***Porcellio echinatus* Lucas, 1849**

EXAMINED MATERIAL: **Badajoz:** 1 ♂, Villar del Rey, 26-X-2018, D. Parejo-Pulido leg. – 3 specimens, San Jorge de Alor, 17-XI-2018, D. Parejo-Pulido leg.

A Baetic-Rif distributed species, frequently recorded in southern Spain and Morocco. For diagnostic caracteres see Vandel (1946) and Schmölzer (1965). Distribution, see Schmalfuss (2003).

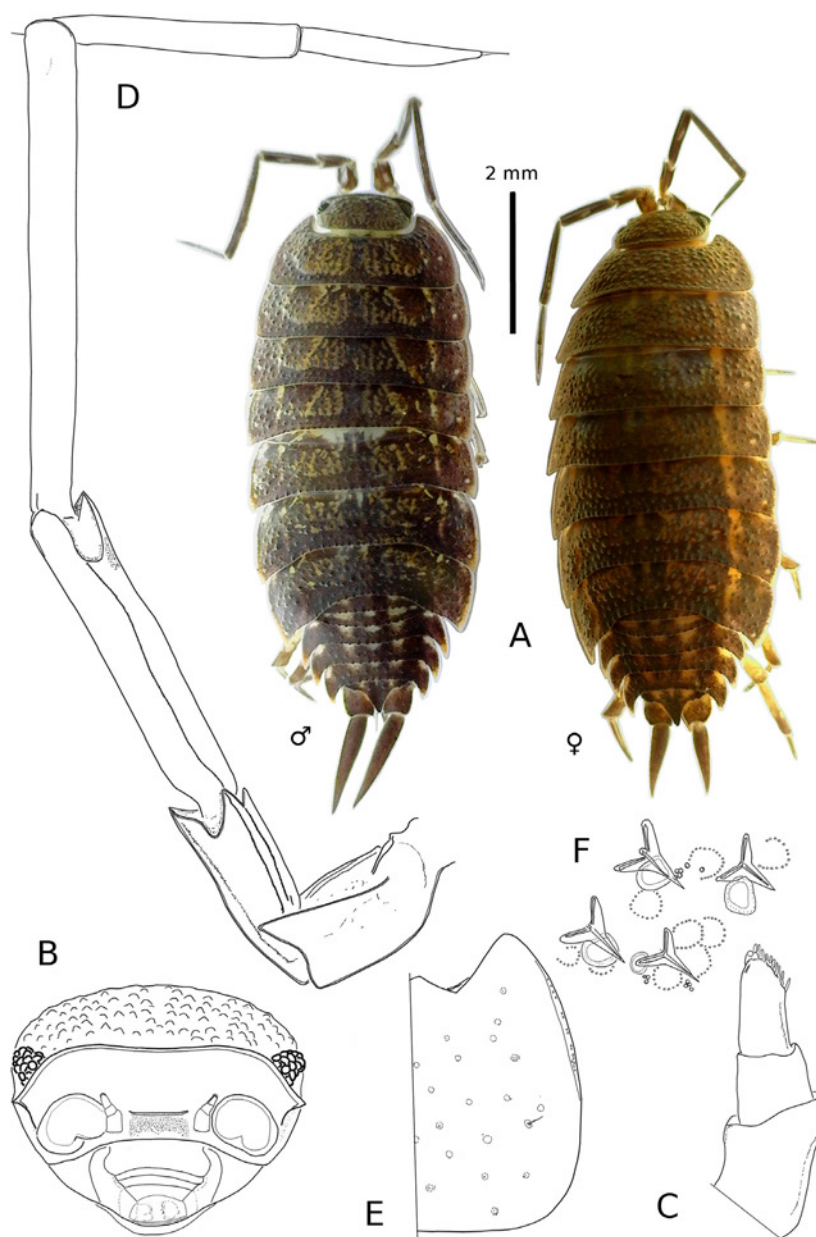


Fig. 6.— *Porcellionides elegans* (Pollo Zorita, 1982). A. Habitus of ♂ and ♀ specimens. B. Cephalon, frontal view (♂). C. First antenna (♂). D. Second antenna (♂). E. First pereon tergite. F. Scale setae.

Fig. 6.— *Porcellionides elegans* (Pollo Zorita, 1982). A. Hábitus del ♂ y de la ♀. B. Cefalón, vista frontal (♂). C. Primera antena (♂). D. Segunda antena (♂). E. Primer pereonito. F. Seda-escamas.



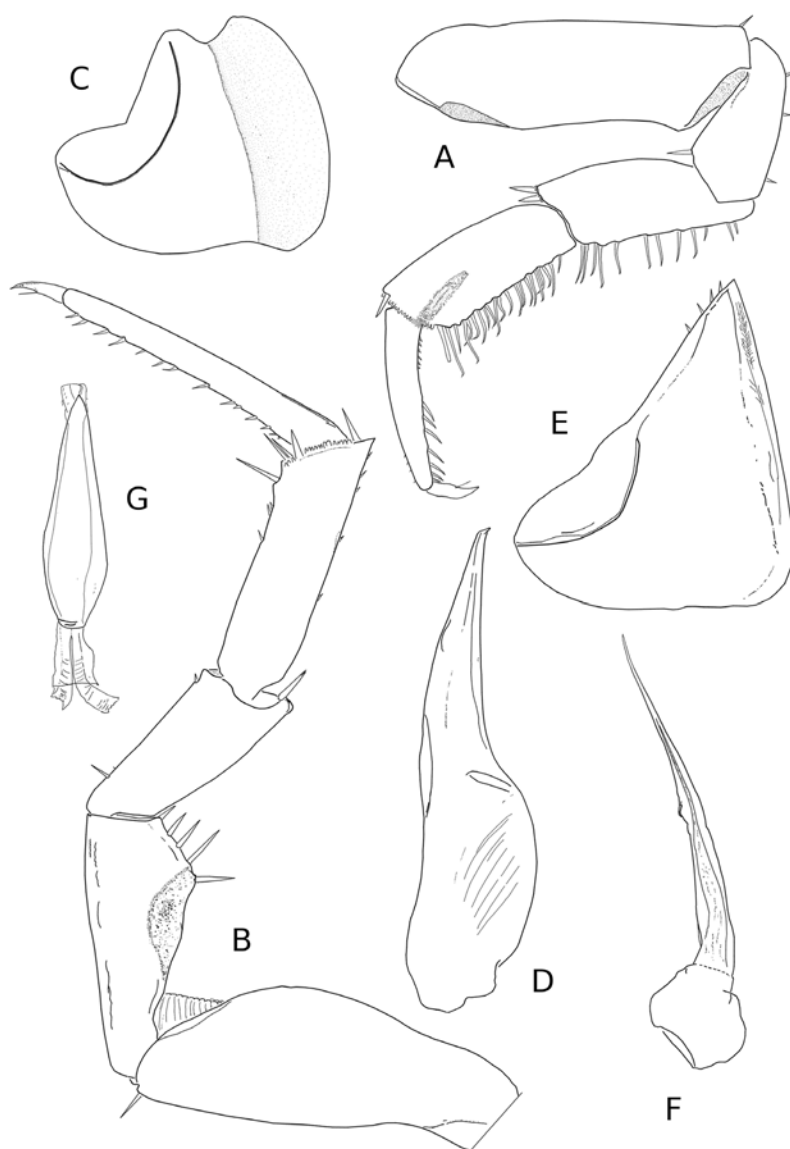


Fig. 7.— *Porcellionides elegans* (Pollo Zorita, 1982), ♂. A. First pereopod. B. Seventh pereopod. C. Pleopod 1 exopod; D. Pleopod 1 endopod. E. Pleopod 2 exopod. F. Pleopod 2 endopod. G. Genital papilla.

Fig. 7.— *Porcellionides elegans* (Pollo Zorita, 1982), ♂. A. Primer pereópodo. B. Séptimo pereópodo. C. Exopodito del pleópodo 1. D. Endopodito del pleópodo 1. E. Exopodito del pleópodo 2. F. Endopodito del pleópodo 2. G. Apófisis genital.

***Porcellio hoffmannseggii hoffmannseggii* Brandt, 1833**

EXAMINED MATERIAL: **Badajoz:** 1 ♂, Villar del Rey, 26-X-2018, D. Parejo-Pulido leg.

Species endemic of the southern Iberian peninsula and Morocco. For diagnostic characteristics and distribution see Schmalfuss (1987, 2003).

***Porcellio laevis* (Latreille, 1804)**

EXAMINED MATERIAL: **Badajoz:** 1 ♀, Villar del Rey, 26-X-2018, D. Parejo-Pulido leg. – 1 ♂, Don Benito, 25-XI-2018, D. Parejo-Pulido leg. – 3 ♂♂, 4 ♀♀, Garbayuela, 9-II-2020, J. Cendrero leg. – 3 ♀♀, Quintana de la Serena, 16-II-2020, J. Cendrero leg.

Common species, widely distributed worldwide, anthropophilic. See Vandel (1962) and Schmalfuss (2003).

**Family Armadillidiidae**

***Armadillidium vulgare* (Latreille, 1804)**

EXAMINED MATERIAL: **Badajoz:** 1 ♂, 1 ♀, Badajoz, 6-X-2019, D. Parejo-Pulido leg. – 1 male, 1 ♀, San Jorge de Alor, 17-XI-2018, D. Parejo-Pulido leg. – 1 ♂, 1 ♀; Don Benito, 8-III-2019, 4-IV-2019. – 1 specimen, same collection datas a for preceding, D. Parejo-Pulido leg. – 2 ♂♂, 1 ♀, Garbayuela, 9-II-2020, J. Cendrero leg.

Common mediterranean species, widely distributed worldwide. See Vandel (1962) and Schmalfuss (2003).

## Family Armadillidae

*Armadillo officinalis* Duméril, 1816

EXAMINED MATERIAL: **Badajoz**: 1 ♀, San Jorge de Alor, 17-XI-2018, D. Parejo-Pulido leg.

A Mediterranean species with a wide distribution area. See Vandel (1962) and Schmalfuss (2003).

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